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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/627,491 | 07/25/2003 | Roger D. Peckham | H0004168 | 4209 |

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EXAMINER

NGUYEN, THU V

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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3661

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,491

Applicant(s)

PECKHAM ET AL.

Examiner

Thu Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. In fig.3, after box 26, the arrow indicated "yes" should be corrected to "no" and the arrow indicated "no" should be corrected to "yes" so that the drawing corresponds to the specification disclosed in paragraph 0032-0033.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

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2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onken et al (US 6,163,744) in view of applicant's admitted prior art (AAPA hereinafter) on paragraph 0005-0007.

As per claim 1, Onken teaches an aircraft flight management system that stores pre-planned lateral route of flight with a plurality of successive waypoints (col.3, lines 44-55). A method providing a return to path maneuver in the event that the aircraft deviates from the pre-planned route comprises: selecting a new candidate active waypoint (col.3, lines 60-67; fig.5 and 10); calculating a return path route to overfly the new waypoint (col.4, lines 33-56; col.5, lines 39-48). Onken does not explicitly teach that the next proximate waypoint will be an active waypoint. However, AAPA teaches activating the next successive leg when the airplane passes a wayline (para 0005), further, it would have been well known that a leg is determined between two successive waypoints, when a leg is activate, the next proximate waypoint must have been activated. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to activate the next successive waypoint on the route of flight of Onken as taught in the AAPA when a waypoint has been passed in order to navigate the aircraft to follow the flight path by following the successive waypoint on the path.

As per claim 2, 9, allowing the user to selectably accepting a calculated path would have been well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow the user to select the calculated path of Onken in order to provide the user the capability of selecting the path he mostly prefer to follow.

As per claim 3-5, since Onken teaches obtaining all points and airways located in the region between the position of the aircraft and the final position for selecting a new candidate waypoint such that an optimal route is obtained (col.5, lines 30-48), Onken obviously includes teaching selecting next proximity waypoint, nearest waypoint of the aircraft, etc. when such the waypoints would make the route selection optimal.

As per claim 6, Onken teaches a down-path waypoint that result in a low recaptured bank angle (col.8, lines 53-67; col.9, lines 1-16).

As per claim 7-8, Onken teaches providing a virtual waypoint that provides an intercept course to a successive waypoint (col.8, lines 54-67; col.9, lines 1-20; fig.8-10).

As per claim 10, 13-19, refer to claims 1, 3-9 above.

As per claim 11-12, Onken teaches modifying the pre-planned route to include new candidate waypoint (fig.5, 10, 11; col.12, lines 31-32). Further, temporarily storing data until the

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data is accepted so that the accepted data can be retrieved for use would have been well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include a well known memory for temporarily storing all the possible waypoints that construct all possible routes in col.12, lines 1-31 of Onken in order to allow the user to select a route that he prefers to follow.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 305-7687, (for formal communications intended for entry)

Or:

(703) 305-7687 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park V, 2451

Crystal Drive, Arlington. VA., Seventh Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The examiner can normally be reached on Monday-Thursday from 8:00 am to 6:00 pm ET.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black, can be reached on (703) 305-8233. The fax phone number for this Group is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1111.



THUY V. NGUYEN
PRIMARY EXAMINER

July 9, 2004